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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,094	07/13/2005	Frank Mierke	265-174	4561
23117	7590	07/05/2006	EXAMINER	
NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				WIMER, MICHAEL C
		ART UNIT		PAPER NUMBER
				2821

DATE MAILED: 07/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/521,094	MIERKE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Michael C. Wimer	2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-15 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/13/2005.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are largely indefinite, particularly Claim 1 since it recites alternative language that appears to claim more than one structure in different arrangements. Specifically, In Claim 1, the alternative recitation of a “dual or multiband antenna” is not clear because there may be additional structure associated with a multiband arrangement, than a dual band structure. It is apparent applicant intends for the structure to be two band because in line 6 of Claim 1, there is a clear recitation of two frequency bands. In lines 7-8, what is the difference between “aligned parallel, or at least approximately parallel, to one another”? The two arrangements cannot exist at once and define a properly operating device. In lines 3-4 what is the difference between “a metallic base surface or base plate”? The two structures cannot coexist. Line 10 recites a base surface and line 11 recites the alternative structures. In line 12, the antecedent basis for “the flat antenna element” is uncertain because two are recited. Similarly, the antecedent basis for the flat antenna element in lines 12-15 cannot be determined particularly since two frequency ranges are recited. In lines 15

and 19, it is unclear what is meant by "than this". In lines 20-21, the language, "is connected or can be connected" is indefinite. In lines 23-24, it is uncertain what the difference is between "an integral stamped and bent metal part". Lines 25-27 seem redundant. Similarly, lines 28-35 are not understood relative to the alternative language, the language "and/or" in line 29, "has or have adjacent" in line 30, "higher than this coming to rest" in line 34, and "in a plan view..." in line 35. Lines 36-39 are not at all understood because of the alternative language, which actually describes, along with the language in lines 9-11 where it implies a stacked relationship, a total of three arrangements of radiating structures that cannot appear in a single claim. Lines 40-41 are not understood because they relate to "a flat antenna arranged at the top", which neither interrelates nor has a proper antecedent basis in order to form a properly operating antenna device.

The language in lines 41-43, "in the form of...in this way" is not understood because there lacks a clear interrelationship of structure.

Claim 2 recites adjacent flat antenna elements, which lacks a clear antecedent in order to define a complete and operable device.

Claim 3 recites "the flat antenna element which is arranged at the bottom", and in line 4, the antenna element...", where both phrases lack a clear antecedent.

In Claim 4, the flat element arranged at the top lacks a clear antecedent and relationship of structure. Also, the language, "to be precise..." is not understood. Also, the "bending line" is undefined relative to the recited structure that makes

up the antenna. In the last line, “the...element” lacks a clear antecedent because there are two elements recited.

Claim 5 is not at all understood regarding the “end edges” and “longitudinal edges” of the “antenna vane”, all undefined relative to the other antenna structure recited in the claims.

In Claim 6, the alternative language “converge...or diverge” does not make it clear how the structure is defined. The “end edges” are undefined. Similar problems occur in Claims 7-9.

In Claim 7, the language, “those side edges...vanes”, “run from their face” are undefined.

In Claim 8, the language, “those stamped edges...vanes” and “the lower transmission ranges” are undefined.

In Claim 12, last line, the language, “which is lower than this” is not understood.

In Claim 14, lines 3-4 are not understood relative to the language, “provided...downward” because it does not clearly recite a definitive relationship of structure. Also, the phrase “preferably aligned...” is not a definite recitation of structure.

In Claim 15, it is unclear what is meant by cascaded, since such a term does not place the relative elements in a particular configuration. Also, the language “similar in shape” does not positively recite any meaningful antenna structure which may be defined in the claim.

***Allowable Subject Matter***

3. Claims 1-15 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. These claims appear to recite allowable subject matter but cannot be allowed until the above rejection is obviated.

4. The patents to Bettin et al.(6856285), Poilasne et al. (6456243) and Jones et al. (4162499) are cited as of interest showing multi-band antennas.

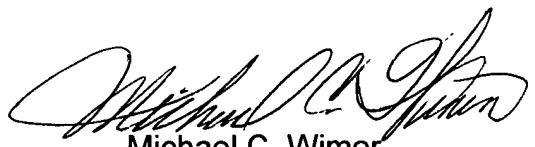
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Wimer whose telephone number is (571) 272-1833. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun O. Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Primary Examiner  
Art Unit 2828

MCW  
5/22/2006